

# **EXHIBIT 7**

PATENT

Agent's Docket No. 13598-US

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of )  
ZABIHI, Attaullah et al. )  
Serial No: 10/227,863 ) Art Unit: 2616  
Filed: August 27, 2002 ) Examiner: LY, Anh Vu H.  
)

For: **STACKABLE VIRTUAL LOCAL AREA NETWORK PROVISIONING IN  
BRIDGED NETWORKS**

October 19, 2007

Commissioner for Patents  
U.S. Patent and Trademark Office  
Alexandria, VA 22313-1450

**RESPONSE TO OFFICE ACTION MAILED JUNE 21, 2007**

Sir:

In response to the Office Action dated June 21, 2007, please amend this application as follows:

## AMENDMENTS TO THE CLAIMS

1. (currently amended) A method of provisioning a backbone Virtual Local Area Network (VLAN) comprising ~~the steps of:~~
  - a. obtaining at least one backbone VLAN IDentifier;
  - b. selecting a plurality of backbone VLAN trunks; and
  - c. associating the backbone VLAN ID with each one of the plurality of backbone VLAN trunks;  
the selection and association of the backbone VLAN ID with each one of the plurality of backbone VLAN trunks being undertaken irrespective of [[a]] one of an in-use and a stand-by designation of each one of the plurality of backbone VLAN trunks.
2. (currently amended) A method of provisioning a backbone VLAN as claimed in claim 1, the method further comprising [[a step of:]] tracking previously obtained backbone VLAN IDs.
3. (currently amended) A method of provisioning a backbone VLAN as claimed in claim 1, the method further comprising [[a step of:]] generating the at least one backbone VLAN ID.
4. (currently amended) A method of provisioning a backbone VLAN as claimed in claim 3, wherein generating the at least one backbone VLAN ID, ~~the method further comprises a step of:~~ generating a unique backbone VLAN ID.
5. (currently amended) A method of provisioning a backbone VLAN as claimed in claim 1, wherein selecting the plurality of backbone VLAN trunks, ~~the method further comprises a step of:~~ selecting all managed backbone VLAN trunks.
6. (currently amended) A method of provisioning a backbone VLAN as claimed in claim 5, wherein selecting all managed backbone VLAN trunks, the method further

comprises a step of: selecting all managed backbone VLAN trunks in an associated realm of management.

7. (currently amended) A method of provisioning a backbone VLAN as claimed in claim 5, ~~wherein selecting all managed backbone VLAN trunks, the method further comprises a step of: further comprising~~ de-selecting at least one backbone VLAN trunk.

8. (currently amended) A method of provisioning a backbone VLAN as claimed in claim 1, wherein associating the backbone VLAN ID with the plurality of backbone VLAN trunks, ~~the method further comprises steps of:~~

a. determining a plurality of stackable trunk ports corresponding to the plurality of backbone VLAN trunks; and

b. associating the backbone VLAN ID with each one of the plurality of stackable trunk ports;

the association of the backbone VLAN ID with each one of the plurality of stackable trunk ports being undertaken irrespective of [[a]] one of an in-use and a stand-by designation of each one of the plurality of backbone VLAN trunks and each one of the plurality of stackable trunk ports.

9. (currently amended) A method of provisioning a backbone VLAN as claimed in claim 8, wherein determining the plurality of stackable trunk ports, ~~the method further comprises a step of:~~ selecting all managed stackable trunk ports.

10. (currently amended) A method of provisioning a backbone VLAN as claimed in claim 9, wherein selecting all stackable trunk ports, ~~the method further comprises a step of:~~ selecting all managed stackable trunk ports in the associated realm of management.

11. (currently amended) A method of provisioning a backbone VLAN as claimed in claim 9, ~~wherein selecting all stackable trunk ports, the method further comprises a step of:~~ further comprising de-selecting at least one selected stackable trunk port.

12. (currently amended) A method of provisioning a backbone VLAN as claimed in claim 8, wherein associating the backbone VLAN ID with each one of the plurality of stackable trunk ports, ~~the method further comprises a step of:~~ issuing commands to the plurality of stackable trunk ports to enable support for backbone VLAN ID associated communications.

13. (currently amended) A method of provisioning a backbone VLAN as claimed in claim 1, further comprising ~~steps of:~~

- a. selecting at least two tunnel access ports; and
- b. associating the backbone VLAN ID with the selected tunnel access ports.

14. (currently amended) A method of provisioning a backbone VLAN as claimed in claim 13, wherein associating the backbone VLAN ID with the selected tunnel access ports, ~~the method further comprises a step of:~~ issuing commands to the selected tunnel access ports to enable support for backbone VLAN ID associated communications.

15. (currently amended) A method of provisioning a backbone VLAN as claimed in claim 1, further comprising ~~a step of~~ issuing commands to determine a backbone VLAN provisioning status associated with at least one of a backbone VLAN, a backbone VLAN trunk, a stackable trunk port, a tunnel access port, and a VLAN access port.

16. (currently amended) A method of provisioning a backbone VLAN as claimed in claim 1, further comprising ~~a step of:~~ defining at least one switching rule by specifying [[a]] one of:

- i. a VLAN access port to VLAN access port binding;
- ii. a VLAN access port to VLAN trunk port binding;
- iii. a VLAN access port to stackable trunk port binding;
- iv. a VLAN trunk port to VLAN trunk port binding; and
- v. a tunnel access port to stackable trunk port binding.

17. (currently amended) A method of provisioning a backbone VLAN trunk comprising ~~steps of:~~:

- a. obtaining a plurality of backbone VLAN IDs associated with a corresponding plurality of provisioned backbone VLANs; and
- b. associating the plurality of backbone VLAN IDs with the backbone VLAN trunk;

the association of the plurality of backbone VLAN IDs with the backbone VLAN trunk being undertaken irrespective of [[a]] one of an in-use and a stand-by designation of the backbone VLAN trunk.

18. (currently amended) A method of provisioning a backbone VLAN trunk as claimed in claim 17, wherein obtaining the plurality of backbone VLAN IDs, ~~the method further comprises a step of:~~ obtaining backbone VLAN IDs associated with all provisioned backbone VLANs.

19. (currently amended) A method of provisioning a backbone VLAN trunk as claimed in claim 17, wherein obtaining backbone VLAN IDs associated with all provisioned backbone VLANs, ~~the method further comprises a step of:~~ obtaining backbone VLAN IDs associated with all provisioned backbone VLANs in a realm of management.

20. (currently amended) A method of provisioning a backbone VLAN trunk as claimed in claim 17, ~~wherein subsequent to obtaining the plurality of backbone VLAN IDs,~~ ~~the method further comprises a step of:~~ disregarding at least one backbone VLAN ID further comprising disregarding at least one backbone VLAN ID subsequent to obtaining the plurality of backbone VLAN IDs.

21. (currently amended) A method of provisioning a backbone VLAN trunk as claimed in claim 17, wherein associating the plurality of backbone VLAN IDs with the backbone VLAN trunk, ~~the method further comprises steps of:~~

- a. determining at least one stackable trunk port corresponding to the backbone VLAN trunk; and
- b. associating the backbone VLAN IDs with the at least one stackable trunk port;

the association of the backbone VLAN IDs with the at least one stackable trunk port being undertaken irrespective of [[a]] one of an in-use and a stand-by designation of the backbone VLAN trunk and the at least one stackable trunk port.

22. (currently amended) A method of provisioning a backbone VLAN trunk as claimed in claim 21, wherein associating the backbone VLAN ID with the at least one stackable trunk port, ~~the method further comprises a step of:~~ issuing at least one command to the at least one stackable trunk port to enable support for backbone VLAN ID associated communications.

23. (currently amended) A method of provisioning a backbone VLAN trunk as claimed in claim 17, further comprising ~~a step of~~ issuing commands to determine a backbone VLAN provisioning status associated with at least one of a backbone VLAN, a backbone VLAN trunk, and a stackable trunk port.

24. (currently amended) A method of provisioning a stackable trunk port comprising ~~steps of:~~

- a. obtaining a plurality of backbone VLAN IDs associated with a corresponding plurality of provisioned backbone VLANs; and
- b. associating the plurality of backbone VLAN IDs with the stackable trunk port;

the association of the plurality of backbone VLAN IDs with the stackable trunk port being undertaken irrespective of [[a]] one of an in-use and a stand-by designation of the stackable trunk port.

25. (currently amended) A method of provisioning a stackable trunk port as claimed in claim 24, wherein obtaining the plurality of backbone VLAN IDs, ~~the method further~~

comprises a step of: obtaining backbone VLAN IDs associated with all provisioned backbone VLANs.

26. (currently amended) A method of provisioning a stackable trunk port as claimed in claim 24, wherein obtaining backbone VLAN IDs associated with all provisioned backbone VLANs, ~~the method further comprises a step of:~~— obtaining backbone VLAN IDs associated with all provisioned backbone VLANs in a realm of management.

27. (currently amended) A method of provisioning a stackable trunk port as claimed in claim 24, ~~wherein subsequent to obtaining the plurality of backbone VLAN IDs, the method further comprises a step of:~~ further comprising disregarding at least one backbone VLAN ID subsequent to obtaining the plurality of backbone VLAN IDs.

28. (currently amended) A method of provisioning a stackable trunk port as claimed in claim 24, wherein associating the backbone VLAN IDs with the stackable trunk port, ~~the method further comprises a step of:~~— issuing at least one command to the stackable trunk port to enable support for backbone VLAN ID associated communications.

29. (currently amended) A method of provisioning a stackable trunk port as claimed in claim 24, further comprising ~~a step of~~ issuing commands to determine a backbone VLAN provisioning status associated with at least one of a backbone VLAN, and a stackable trunk port.

30. (currently amended) A backbone VLAN provisioning human-machine interface comprising:

- a. a backbone VLAN ID selector for selecting a plurality of backbone VLAN IDs;
- b. a backbone VLAN trunk selector for selecting a plurality of backbone VLAN trunks; and
- c. an activator for committing associations between the plurality of backbone VLAN IDs and the plurality of backbone VLAN trunks;

the associations between the plurality of backbone VLAN IDs and the plurality of backbone VLAN trunks being undertaken irrespective of [[a]] one of an in-use and a stand-by designation of each one of the plurality of backbone VLAN trunks.

31. (original) A backbone VLAN provisioning human-machine interface as claimed in claim 30, wherein the backbone VLAN ID selector is further operable to select the plurality of backbone VLAN IDs corresponding to all backbone VLANs provisioned in a managed communications network.

32. (original) A backbone VLAN provisioning human-machine interface as claimed in claim 30, wherein the backbone VLAN ID selector is further operable to de-select at least one backbone VLAN ID from the plurality of selected backbone VLAN IDs.

33. (original) A backbone VLAN provisioning human-machine interface as claimed in claim 30, wherein the backbone VLAN trunk selector is further operable to select all backbone VLAN trunks provisioned in a managed communications network.

34. (original) A backbone VLAN provisioning human-machine interface as claimed in claim 30, wherein the backbone VLAN trunk selector is further operable to de-select at least one backbone VLAN trunk from the plurality of selected backbone VLAN trunks.

35. (original) A backbone VLAN provisioning human-machine interface as claimed in claim 30, wherein the activator is further operable to initiate the issuing of at least one command to effect the associations between the plurality of backbone VLAN IDs and the plurality of backbone VLAN trunks.

36. (original) A backbone VLAN provisioning human-machine interface as claimed in claim 30, wherein the backbone VLAN trunk selector further comprises a stackable trunk port selector operable to select at least one stackable trunk port.

37. (original) A backbone VLAN provisioning human-machine interface as claimed in claim 36, wherein stackable trunk port selector operable to select all stackable trunk ports in a managed communications network.

38. (original) A backbone VLAN provisioning human-machine interface as claimed in claim 37, wherein stackable trunk port selector is further operable to de-select at least one stackable trunk port.

39. (original) A backbone VLAN provisioning human-machine interface as claimed in claim 37, wherein the activator is further operable to initiate the issuing of at least one command to effect the associations between the plurality of backbone VLAN IDs and the plurality of stackable trunk ports.

40. (original) A backbone VLAN provisioning human-machine interface as claimed in claim 30, further comprising a tunnel access port selector for selecting at least two tunnel access ports.

41. (currently amended) A backbone VLAN provisioning human-machine interface as claimed in claim 40[[]], the activator further being operable to effect associations between the plurality of backbone VLAN IDs and the at least two tunnel access ports.

42. (original) A backbone VLAN provisioning human-machine interface as claimed in claim 41, wherein the activator is further operable to issue at least one command to effect the associations between the plurality of backbone VLAN IDs and the at least two tunnel access ports.

43. (currently amended) A backbone VLAN provisioning human-machine interface as claimed in claim 30, further ~~being operable to display comprising means for displaying~~ a backbone VLAN provisioning status for at least one of a backbone VLAN, a backbone VLAN trunk, a stackable trunk port, a VLAN access port and a tunnel access port.

44. (currently amended) A backbone VLAN provisioning human-machine interface as claimed in claim 30, further ~~being operable to define~~ comprising means for defining at least one switching rule by specifying a one of:

- i. a VLAN access port to VLAN access port binding;
- ii. a VLAN access port to VLAN trunk port binding;
- iii. a VLAN access port to stackable trunk port binding;
- iv. a VLAN trunk port to VLAN trunk port binding; and
- v. a tunnel access port to stackable trunk port binding.

45. (currently amended) A network management system using the human-machine interface ~~claimed defined~~ in claim 30 to effect backbone VLAN provisioning in a managed communications network.

## REMARKS

Claims 1-30 and 41, and 43-45 have been amended solely to improve language by correcting grammatical errors and punctuation errors. No new subject matter has been added. The scope of the claims has not been changed in any way.

The Examiner has objected to claims 1, 8, 17, 21, 24, 28, and 30-45 as containing various specified informality errors. The claims have been amended to correct most of the alleged errors. However, the words “human-machine” have not been removed from the preamble of claims 30-45, as the Applicant does not feel that these words are incorrect. If the Examiner insists that these words be removed, the Examiner is kindly asked to provide an explanation as to why these words should be removed.

The Examiner has objected to claims 1-45 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,678,241 issued to Gai *et al.*

Gai teaches a method of route redundancy for VLANs. Each VLAN is considered a logical VLAN, designated by an ID (in Gai’s example of FIG. 2 and FIG. 5c, these are RED, GREEN, BLUE, and YELLOW). Each “logical” VLAN is assigned a number of actual, “physical” VLANs. For each logical VLAN, one of the physical VLANs is designated as “active”, and the remaining physical VLANs are designated as “stand-by” or “unusable” (FIG. 5c, and column 12 lines 25-42). If a link within the active physical VLAN for a logical VLAN fails, then the various switches and routers can quickly switch to one of the stand-by physical VLANs for that logical VLAN (abstract, column 5 lines 17-51). No active VLANs are grouped in any way. What appears as a grouping of multiple physical VLANs into a single logical VLAN is really the other way around; for a particular VLAN required by a customer, several physical VLANs are designated in order to provide stand-by routes in case of link failure.

This is completely different from the present invention. The present invention, as claimed, is directed to a method of increasing the number of possible actual VLANs beyond the usual 4096 (or 4094, if the reserved VLAN IDs are ignored) limit. Backbone VLANs are defined, each with a backbone VLAN ID. A VLAN has its usual VLAN ID and in

addition has a backbone VLAN ID. Backbone VLANs travel over backbone VLAN trunks, which are defined between stackable trunk ports on core routers. The association between the backbone VLAN IDs and the backbone VLAN trunks is irrespective of whether the backbone trunks are designated as stand-by or in-use. An interface is provided which ensures that each VLAN and VLAN ID combination is unique, and allows relatively easy provisioning of backbone VLANs, backbone VLAN trunks, and stackable trunk ports.

The differences between Gai and the present invention will be seen clearly by considering the individual elements of the claims.

Claim 1 is directed to a method of provisioning a backbone VLAN. Gai does not teach such a method. Gai teaches a method of providing stand-by VLANs for an active VLAN by assigning a plurality of physical VLANs to an actual VLAN. One of these plurality of VLANs is designated as active (step 408 of FIG. 4), and the others are designated as stand-by or unusable (FIG. 5). This is in no way equivalent to provisioning a backbone VLAN. A backbone VLAN is a path through the core of a network, defined by the switching rules for the stackable trunk ports, which is able to carry a number of VLANs. The backbone VLAN uses a field which is in addition to the usual VLAN ID field in order that the various core routers through which the backbone VLAN passes are able to switch packets to appropriate stackable trunk ports. Gai does not teach backbone VLANs in any way.

Claim 1 also includes the limitation of obtaining at least one backbone VLAN ID. This is a limitation not taught by Gai. Nowhere does Gai discuss backbone VLAN IDs. The Examiner has equated the ID of the logical VLANs of Gai (e.g. RED) with the backbone VLAN IDs when considering an earlier limitation of the claim. As discussed above with reference to the overall teachings of Gai, the ID of a logical VLAN (e.g. RED) is the ID of a single actual VLAN. This single actual VLAN then has several distinct physical VLANs assigned to it, each distinct physical VLAN being over a different path in order to provide redundancy for the actual VLAN. This is in no way equivalent to a backbone VLAN ID, since a backbone VLAN ID identifies a backbone VLAN which, as explained above, may carry a multitude of VLANs over a single trunk.

Claim 1 also includes the limitation of selecting a plurality of backbone VLAN trunks. This is a limitation not taught by Gai. The Examiner states that Gai teaches this limitation as the links 428 of Figure 2. The Applicant respectfully submits the mere presence of the links 248 does not teach selecting the links, especially in the context of a provisioning method. In order to teach this limitation of claim 1, the Examiner must show where Gai teaches selecting one of the links as part of a provisioning method.

Furthermore, column 6 lines 19-23 of Gai explain that the links 428 are “trunks or links 248, such as point-to-point links. Link 248 basically represent communication paths for transporting messages, such as data frames, between various network components”. The links 248 are therefore simply generic links between network switches, and no suggestion at all is given that these are backbone VLAN trunks.

Claim 1 also includes the limitation of associating the backbone VLAN IDs with each one of the plurality of backbone VLAN trunks. This is a limitation not taught by Gai. The Examiner has stated that Gai teaches this limitation at column 7 lines 10-15. However, as discussed above, Gai does not teach backbone VLAN IDs or backbone VLAN trunks. Furthermore, this passage recites the normal use of VLAN designations for VLANs. As stated at column 6 lines 53-65, the VLAN designations are the usual VLAN IDs used for normal VLANs, namely numeric values having values between 0 and 4095. These are clearly not backbone VLAN IDs, which are designed deliberately to get around the hard limit of 4096 (4094 if reserved IDs are not used) possible unique VLAN designations.

Claim 1 also includes the limitation that the selection and association of the backbone VLAN IDs with the backbone VLAN trunks is undertaken irrespective of an in-use and a stand-by designation of the backbone VLAN trunks. This is a limitation not taught by Gai. As discussed above, Gai does not teach backbone VLAN IDs or backbone VLAN trunks. More importantly, the Examiner states that “each physical VLAN is designated as ACTIVE, STAND-BY, and UNUSABLE. This implies that the trunks in the physical VLANs associated with each logical VLAN are undertaken irrespective of a one in-use and/or stand-by designation”. This is actually contrary to the limitation of claim 1. Because each logical VLAN (which the Examiner has equated with a backbone VLAN by equating the ID RED with a backbone VLAN ID) deliberately has one active physical VLAN associated with it and a number of stand-by physical VLANs, the association cannot

be said to be irrespective of whether the trunk is in-use or stand-by. In fact, if Gai's association was irrespective of whether the trunks were in-use or stand-by, then the method taught by Gai would not work because the entire point of Gai is to have exactly one in-use physical VLAN and one or more stand-by physical VLANs to act as redundant VLANs should the active VLAN fail.

Claims 2-16 are dependent on claim 1 and include the same limitations discussed above. Because Gai does not teach each and every element of the claims, the Applicant respectfully submits that claims 1-16 are not anticipated by Gai.

Claim 17 is directed to a method of provisioning a backbone VLAN trunk. As discussed above with reference to claim 1, Gai does not teach backbone VLAN trunks, nor a method of provisioning a backbone VLAN trunk. Gai at most teaches a method of provisioning redundant VLANs. In any event, the Examiner has not shown where Gai teaches such a method.

Claim 17 also includes the limitation of obtaining a plurality of backbone VLAN IDs associated with a corresponding plurality of provisioned backbone VLANs. This is a limitation not taught by Gai. The Examiner states that Gai teaches this in Figure 5c as the IDs RED, BLUE, etc. However, as discussed above with reference to claim 1, these are IDs associated with logical VLANs and are not IDs associated with backbone VLANs. Furthermore, the mere presence of IDs is not sufficient to show a step of obtaining the IDs, certainly not in the context of a method of provisioning.

Claim 17 also includes the limitation of associating the plurality of backbone VLAN IDs with the backbone VLAN trunk. This is a limitation not taught by Gai. The Examiner states that Gai teaches this at column 7 lines 10-15. However, as discussed above with reference to claim 1, this passage teaches the usual use of normal VLAN IDs, which are different from backbone VLAN IDs.

Claim 17 also includes the limitation that the association of the plurality of backbone VLAN IDs with the backbone VLAN trunk is undertaken irrespective of the in-use or stand-by designation of the backbone VLAN trunk. Gai does not teach backbone VLAN IDs or a backbone VLAN trunk. Regarding the association being irrespective of the in-use or stand-by designation, as discussed above with reference to claim 1 Gai expressly

takes into account whether a physical VLAN is active or stand-by in making the association, and is therefore the opposite of “irrespective”.

Claims 18-23 are dependent on claim 17 and include the same limitations discussed above. Since Gai does not teach each and every element of the claims, the Applicant respectfully submits that claims 17-23 are not anticipated by Gai.

Claim 24 is directed to a method of provisioning a stackable trunk port. The Examiner has not shown where Gai teaches a method of provisioning a stackable trunk port.

Claim 24 includes the limitation of obtaining a plurality of backbone VLAN IDs associated with a corresponding plurality of provisioned backbone VLANs. This is a limitation not taught by Gai. The Examiner states that Gai teaches this in Figure 5c as the IDs RED, BLUE, etc. However, as discussed above with reference to claim 17, these are IDs associated with logical VLANs and are not IDs associated with backbone VLANs. Furthermore, the mere presence of IDs is not sufficient to show a step of obtaining the IDs, certainly not in the context of a method of provisioning.

Claim 24 also includes the limitation of associating the plurality of backbone VLAN IDs with the stackable trunk port. This is a limitation not taught by Gai. The Examiner states that Gai teaches this as the association between trunk ports 302a-302c with the RED identifier. However, as discussed above, the RED identifier is not a backbone VLAN ID.

Claim 24 also includes the limitation that the association of the plurality of backbone VLAN IDs with the stackable trunk port is undertaken irrespective of the in-use or stand-by designation of the stackable trunk port. However, as discussed above with reference to claims 1 and 17, Gai expressly takes into account whether a physical VLAN is active or stand-by in making the association, and is therefore the opposite of “irrespective”.

Claims 25-29 are dependent on claim 24 and include the same limitations discussed above. Since Gai does not teach each and every element of the claims, the Applicant respectfully submits that claims 24-29 are not anticipated by Gai.

Claim 30 is directed to a backbone VLAN provisioning human-machine interface. The limitations of the claims include selectors and activators for effecting specified actions.

The Examiner has not shown where Gai teaches such a human-machine interface. The Examiner has treated claim 30 the same as claim 1, but these are different categories of claims and comprise different limitations. For example, addresses the preamble of claim 30 by stating that Gai discloses a method of provisioning a backbone VLAN in Figure 4. However, Figure 4 in no way discloses a human-machine interface as recited in claim 30. This ignores a major aspect of the invention, which is a NMS interface with specified functionality buttons which simplifies provisioning of backbone VLANs.

Claim 30 includes the limitation of a backbone VLAN ID selector for selecting a plurality of backbone VLAN IDs. As discussed above, Gai does not teach backbone VLAN IDs. In addition, the Examiner has not shown where Gai teaches such a selector within a human-machine interface.

Claim 30 also includes the limitation of a backbone VLAN trunk selector for selecting a plurality of backbone VLAN trunks. As discussed above, Gai does not teach backbone VLAN trunks. In addition, the Examiner has not shown where Gai teaches such a selector within a human-machine interface.

Claim 30 also includes the limitation of an activator for committing associations between the plurality of backbone VLAN IDs and the plurality of backbone VLAN trunks. As discussed above, Gai does not teach backbone VLAN IDs or backbone VLAN trunks. In addition, the Examiner has not shown where Gai teaches such an activator within a human-machine interface.

Claim 30 also includes the limitation that the associations between the plurality of backbone VLAN IDs and the plurality of backbone VLAN trunks is undertaken irrespective of the in-use or stand-by designation of the backbone VLAN trunks. However, as discussed above with reference to claims 1 and 17, Gai expressly takes into account whether a physical VLAN is active or stand-by in making the association, and is therefore the opposite of “irrespective”.

Claims 31-44 are dependent on claim 30 and include the same limitations discussed above. Claim 45 is directed to an NMS which includes the limitations of claim 30. Since Gai does not teach each and every element of the claims, the Applicant respectfully submits that claims 30-45 are not anticipated by Gai.

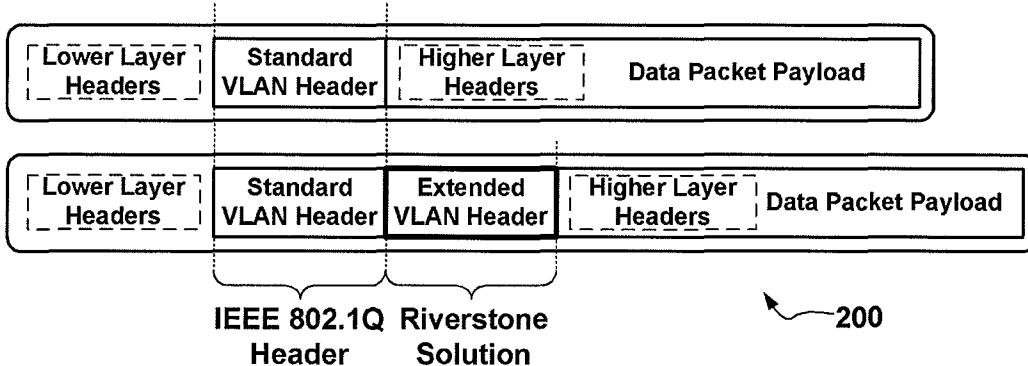
The Examiner is kindly asked to consider the aspect of the invention reflected in claims 30-45, namely the NMS interface whose inventive elements simplify provisioning of backbone VLANs.

In view of the foregoing, it is believed that the claims at present on file and as amended herein are in condition for allowance. Reconsideration and action to this end is respectfully requested.

Respectfully submitted,

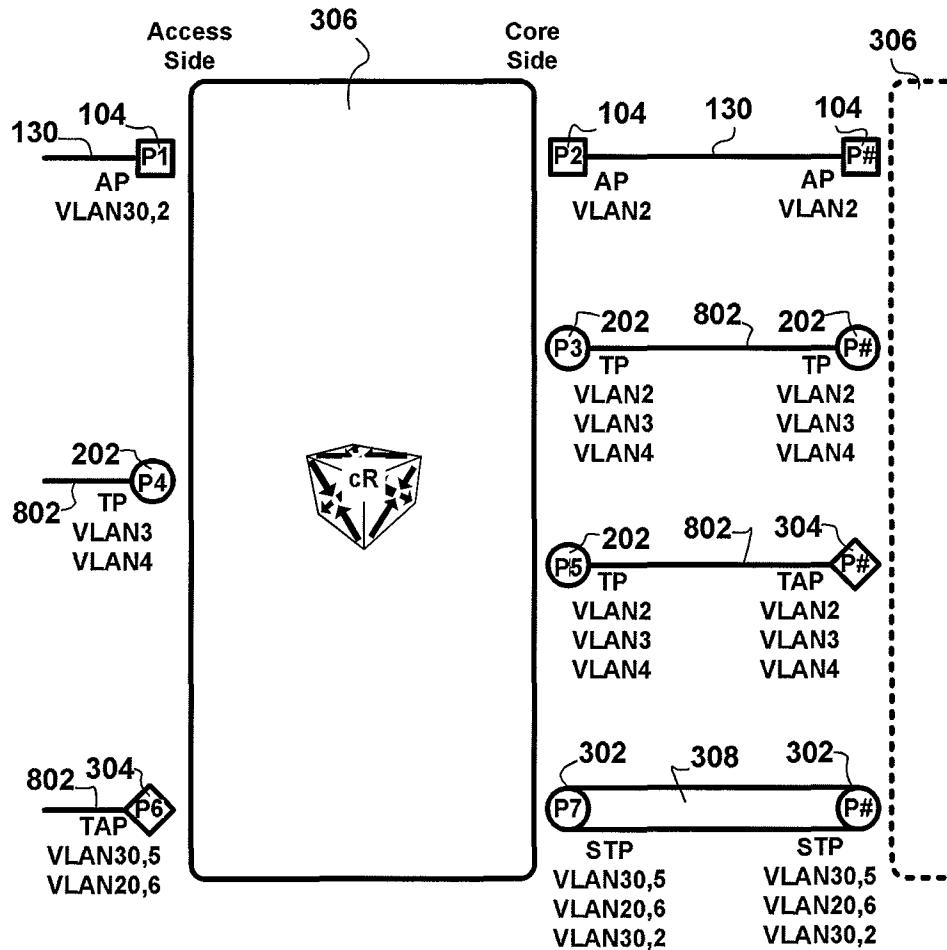
  
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**FIG. 2**

**PRIOR ART**



**FIG. 6**